

REMARKS

This Amendment responds to the Office Action dated January 24, 2007 in which the Examiner rejected claims 1-8 under 35 U.S.C. §102(b) and rejected claims 9-12 under 35 U.S.C. §103.

Claim 1 claims a permanent magnet molding apparatus comprising: a mounting base, a transferable metal die unit, a pressurizing unit and a magnetic field generating means. The transferable metal die unit is transferable onto and off the mounting base. The die unit includes a die, a lid member and a pair of punches. The die has a cavity of a desired cross-sectional shape in which magnet molding material powder is filled. The cavity extends in groove-like form in a specific direction on a surface of the die. The lid member is placed against a facing surface of the die as if covering the cavity. The pair of punches have the same cross-sectional shape as the cavity. The punches are positioned to fit in the cavity such that the punches close the cavity at both ends thereof. The punches are made slidable in directions in which the punches go into contact with and become separated from the magnet molding material powder. The pressurizing means is for holding the metal die unit, which has been transferred to the mounting base, with the magnet molding material powder filled in the cavity and is for pressurizing the magnet molding material powder by driving the two punches such that the two punches slide in their approaching directions. The magnetic field generating means is for magnetizing the magnet molding material powder pressurized in the cavity while applying a magnetic field thereto in a direction perpendicular to a direction of pressurization.

Through the structure of the claimed invention having punches which are positioned to fit in a cavity of a die, having the punches close the cavity at both ends,

having the punches have the same cross-sectional shape as the cavity and having the punches go into contact with the magnetic molding material powder, as claimed in claim 1, the claimed invention provides a permanent magnet holding apparatus with improved productivity and reliability. The prior art does not show, teach or suggest the invention as claimed in claim 1.

Claims 1-8 were rejected under 35 U.S.C. §102(b) as being anticipated by *Sagawa et al* (U.S. Patent No. 5,762,967).

Applicants respectfully traverse the Examiner's rejection of the claims under 35 U.S.C. §102(b). The claims have been reviewed in light of the Office Action, and for reasons which will be set forth below, Applicants respectfully request the Examiner withdraws the rejection to the claims and allows the claims to issue.

Sagawa et al appears to disclose a pressing apparatus in which powder compacts are produced by pressing with punches. Referring to FIG. 3, a vertical sectional view of the apparatus is shown in which (m) is a rubber mold filled with a magnetic powder for compact at a high packing density, and (1) is a die in which the rubber mold (m) is loaded. (2a) is an upper punch and (2b) is a lower punch. (3) is a coil for generating a pulsed magnetic field and (4) is a press plunger. (5) is an upper punch supporting plate which is fixed to the press plunger (4), and to the upper punch supporting plate (5), a nearly cylindrical sleeve (6) is fixed. The upper part of the upper punch (2a) is fitted into the sleeve (6) in a slidable manner. A spring (7) such as a coil spring or the like winds round the peripheral part of the upper punch (2a). The upper end of the spring (7) is fitted into a recess (6') provided in the sleeve (6), while the lower end of the spring (7) is fitted into a recess (2a') provided in the lower part of the upper punch (2a). A space (8) is formed by the upper surface of the

upper punch (2a), the inner peripheral surface of the sleeve (6) and the bottom surface of the upper punch supporting plate (5). A bolt (9) fitted into the recess (4') provided in the central part of the bottom of the press plunger (4) penetrates the above mentioned supporting plate (5). The end of the bolt (9) is inserted into a space (10) provided along the axial line in the central part of the upper punch (2a) in a slidable manner. The cover (m2) is provided for covering the cavity (c) of the body (m1) of the rubber mold (m), which prevents the magnetic powder for compact from popping out of the rubber mold (m) when the magnetic field is applied. A back-up plate (11) is fitted into the bottom of the upper punch (2a), which is made of hard rubber or the like and plays the role of sealing the rubber mold (m), preventing the rubber mold (m) from sticking out. The die (1) is cylindrically formed and supported by a supplemental supporting plate (14) provided on an indexed table (13) through a spring means (12) such as a coil spring or plate springs. The resiliency of spring means (12) is far stronger than that of the above mentioned spring (7) winding round the upper punch (2a). On the indexed table (13), stages for each process such as a powder packing stage at which a magnetic powder for compact is packed in the rubber mold (m) are provided, although not shown in the Figure. The indexed table (13) rotates intermittently so that the desired process is carried out at each stage. (Column 4, line 28 through column 5, line 7). A back-up plate (18) of hard rubber or the like is provided on the upper surface of the lower punch (2b), which prevents the rubber mold (m) from sticking out. A die set fixed to the indexed table (13) comprises the die (1), the lower punch (2b) and the like. In the above described pressing apparatus, the lower punch (2b) is secured and the upper punch (2a) is moved downward by the descent of the press plunger (4), thereby pressing the rubber mold

(m) filled with the magnetic powder for compact and loaded in the die (1), between the upper punch (2a) and the lower punch (2b). Contrary to this, it is possible to secure the upper punch (2a) and attach the press plunger (4) to the lower punch (2b) which is moved by up-down movement of the press plunger (4), thereby pressing the magnetic powder for compact filled in the rubber mold (m). (Column 5, lines 15-30).

Thus, *Sagawa et al* merely discloses a lower punch 2b having mounted thereon a back-up plate 18 and die 1. Nothing in *Sagawa et al* shows, teaches or suggests punches positioned to fit in a cavity of a die in which magnetic molding material powder is filled as claimed in claim 1. Rather, in *Sagawa et al*, the lower die 2b is mounted on a back-up plate and thus the lower punch 2b is not fitted in the cavity.

Additionally, *Sagawa et al*, merely discloses a) a cover m2 covering the cavity c of the body m1 and b) a back-up plate 18 provided on the upper surface of the lower punch 2b. Therefore, nothing in *Sagawa et al*, shows, teaches or suggests that the punches close the cavity at both ends thereof as claimed in claim 1. Rather, the cover m2 of *Sagawa et al*, covers the top of the cavity while the bottom of the cavity c is provided within the body m1 supported on back-up plate 18.

Furthermore, *Sagawa et al*, merely discloses securing the lower punch and moving the upper punch 2a or securing the upper punch and moving the lower punch 2b (column 5, lines 20-30). Nothing in *Sagawa et al*, shows, teaches or suggests punches made slidable as claimed in claim 1. Rather, only one of the punches of *Sagawa et al*, is movable.

Also, *Sagawa et al*, merely discloses upper and lower punches 2a, 2b and a cavity c. Nothing in *Sagawa et al*, shows, teaches or suggests the punches have the

same cross-sectional shape as the cavity as claimed in claim 1. Rather, *Sagawa et al.* teaches away from the claimed invention since the cross-sectional shape of the punches 2a, 2b is different from that of the cavity c.

Finally, *Sagawa et al.* merely discloses that the die 1 containing the powder is compressed between the upper punch 2a and lower punch 2b. Nothing in *Sagawa et al.* shows, teaches or suggests punches which go into contact with the magnetic molding material powder as claimed in claim 1. Rather, the only thing in contact with the powder in the cavity in *Sagawa et al.* is the cover m2 and mold m. In other words, the upper punch 2a and lower punch 2b in *Sagawa et al.* are only in contact with the die 1 and never in contact with the powder within the cavity c.

Since nothing in *Sagawa et al.* shows, teaches or suggests a) punches positioned to fit in a cavity of a die filled with magnetic molding material powder, b) punches closing the cavity at both ends thereof, c) punches being made slidable, d) punches having the same cross-sectional shape as the cavity and e) punches going into contact with the magnetic molding material powder as claimed in claim 1, Applicants respectfully request the Examiner withdraws the rejection to claim 1 under 35 U.S.C. §102(b).

Claims 2-8 depend from claim 1 and recite additional features. Applicants respectfully submit that claims 2-8 would not have been anticipated by *Sagawa et al.* within the meaning of 35 U.S.C. § 102(b) at least for the reasons as set forth above. Therefore, applicants respectfully request the Examiner withdraws the rejection to claims 2-8 under 35 U.S.C. §102(b).

Claims 9-12 were rejected under 35 U.S.C. §103 as being unpatentable over *Sagawa et al.* in view of *Maekawa et al.*

Applicants respectfully traverse the Examiner's rejection of the claims under 35 U.S.C. §103. The claims have been reviewed in light of the Office Action, and for reasons which will be set forth below, applicants respectfully request the Examiner withdraws the rejection to the claims and allows the claims to issue.

As discussed above, since nothing in the primary reference to *Sagawa et al.* shows, teaches or suggests the primary features as claimed in claim 1, applicants respectfully submit that the combination of the primary references with the secondary reference to *Maekawa et al* would not overcome the deficiencies of the primary reference. Therefore, applicants respectfully request the Examiner withdraws the rejection to claims 9-12 under 35 U.S.C. §103.

Thus it now appears that the application is in condition for reconsideration and allowance. Reconsideration and allowance at an early date are respectfully requested. Should the Examiner find that the application is not now in condition for allowance, Applicants respectfully request the Examiner enters this Amendment for purposes of appeal.

If for any reason the Examiner feels that the application is not now in condition for allowance, the Examiner is respectfully requested to contact, by telephone, the Applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed within the currently set shortened statutory period, Applicants respectfully petition for an appropriate extension of time. The fees for such extension of time may be charged to our Deposit Account No. 02-4800.

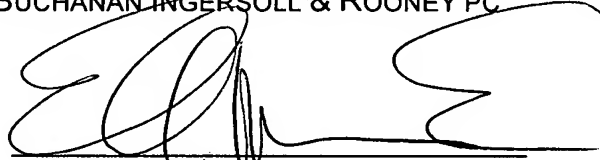
In the event that any additional fees are due with this paper, please charge
our Deposit Account No. 02-4800.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: DRAFT

By:

A handwritten signature in black ink, appearing to read 'EMAS', written over a horizontal line.

Ellen Marcie Emas
Registration No. 32131

P.O. Box 1404
Alexandria, VA 22313-1404
703 836 6620